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(54) Title: METHOD FOR FIRMWARE VARIABLE STORAGE WITH EAGER COMPRESSION, FAIL-SAFE EXTRACTION AND RESTART TIME COMPRESSION SCAN

(57) Abstract: Firmware-based conversion methods for storing converted firmware variables in a firmware storage device, such as flash memory. Under one method, "eager" compression of firmware is performed. In response to a storage request, a determination is made to whether a compressor is available. If it is, the firmware variable is stored in a compressed form in the storage device; if not, the firmware variable is stored in an uncompressed form. In response to a read request for a stored firmware variable, a determination is made to whether the variable is stored in a compressed or uncompressed form. If it is compressed, a decompressor is employed to return the variable to its uncompressed form prior to providing it to the requestor; already uncompressed variables are provided directly to the requestor. An application program interface is provided to enable operating system runtime access to the firmware variables. Similar conversions may be employed separately or in parallel, including encryption.

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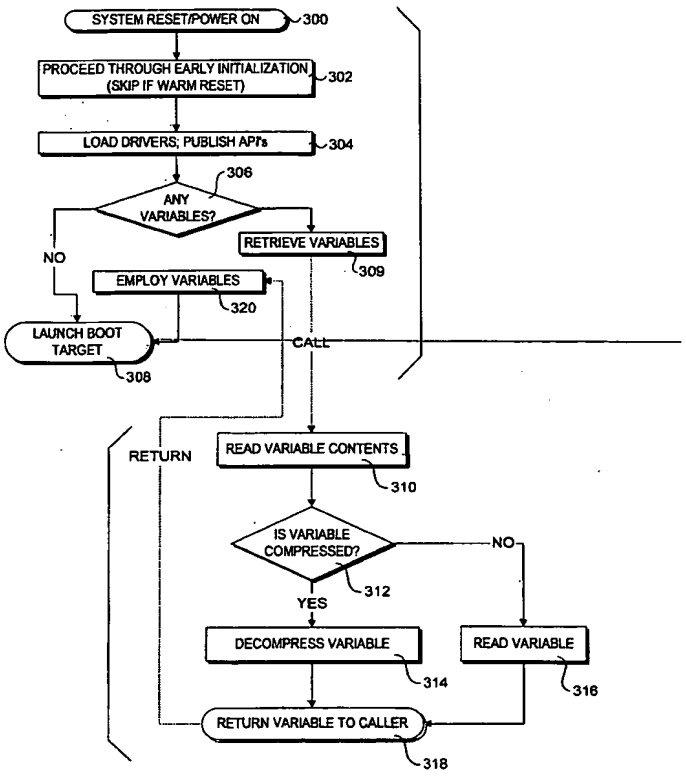

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